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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/635,947	08/06/2003	Stuart L. Roberts	108298729US	1224
25096	7590	02/24/2006	EXAMINER	
PERKINS COIE LLP			EVANS, GEOFFREY S	
PATENT-SEA			ART UNIT	
P.O. BOX 1247			PAPER NUMBER	
SEATTLE, WA 98111-1247			1725	

DATE MAILED: 02/24/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

## Office Action Summary

Application No.

10/635,947

Applicant(s)

ROBERTS ET AL.

Examiner

Geoffrey S. Evans

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

### Status

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

### Disposition of Claims

- 4) ☒ Claim(s) 1-17 and 19-45 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 30-40 is/are allowed.
- 6) ☒ Claim(s) 1-3, 5, 6, 8-12, 14-17, 19, 20, 22-24, 28, 29, 41 and 43-45 is/are rejected.
- 7) ☒ Claim(s) 4, 7, 13, 21, 25-27 and 42 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

### Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

### Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
  - ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
  - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

### Attachment(s)

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)  | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. ____. |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                   | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)             |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)<br>Paper No(s)/Mail Date ____. | 6) <input type="checkbox"/> Other: ____.  |

### DETAILED ACTION

- 1. The indicated allowability of certain claims in the previous office action is withdrawn in view of the newly discovered prior art. The delay in citation of this art is regretted.**
2. The drawings are objected to because in figure 8 element 590 is cross-hatched as a metal instead of as a dielectric or electrical insulator. Corrected drawing sheets in compliance with 37 CFR 1.121(d) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. The figure or figure number of an amended drawing should not be labeled as "amended." If a drawing figure is to be canceled, the appropriate figure must be removed from the replacement sheet, and where necessary, the remaining figures must be renumbered and appropriate changes made to the brief description of the several views of the drawings for consistency. Additional replacement sheets may be necessary to show the renumbering of the remaining figures. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

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3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1,3,5,6,8-10,12,14-17,19,20,22-24,28,29,41,43,44,are rejected under 35 U.S.C. 103(a) as being unpatentable over Ihara in Japan Patent No. 2000-323,517 in view of Tominaga in Japan Patent No. 61-14817. Ihara discloses a method of wire bonding and a wire bonding device by positioning an electrode proximate to a wire (element 6) attached to a terminal of a microelectronic component (see paragraph 3) by electric discharge (see paragraph 7). Ihara does not disclose using two electrodes. Ihara does not disclose using two electrodes to cut the wire. Tominaga teaches using two electrodes (elements 32) that are tip shaped, are on opposite sides of the wire and at an angle generally normal to the wire, one electrode positively charged as a cathode

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and a second electrode negatively charge as an anode (see figure 1) to instantaneously cut a wire. It would have been obvious to adapt Ihara in view of Tominaga to provide this to instantaneously cut the wire. Regarding claim 10, an electric discharge is a short arc. Regarding claim 24, element 41 in figure 1 of Tominaga discloses a controller for selectively causing a discharge between the first and second electrodes.

6. Claims 2 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ihara (517) in view of Tominaga (817) as applied to claim 1 above, and further in view of Nishiura in U.S. Patent No. 6,784,394 B2. Nishiura teaches using an electric discharge to create a ball at a tip end of the wire used in a wire bonding device. It would have been obvious to adapt Ihara in view of Tominaga and Nishiura to provide this to create a ball for a subsequent bonding step.

7. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Ihara (517) in view of Tominaga (817) as applied to claim 41 above, and further in view of Smith et al. in U.S. Patent No. 3,553,417. Smith et al. teaches using electrodes with end portions that are arcuate (see electrodes 36 and 37 in figure 4) to cause the spark to cut the wire near the tip of the electrode.

8. Applicant's arguments with respect to claims of record have been considered but are moot in view of the new ground(s) of rejection.

9. Claims 4, 7, 13, 21, 25-27 and 42 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

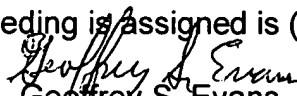
10. Claims 30-40 are allowed.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Geoffrey S Evans whose telephone number is (571)-272-1174. The examiner can normally be reached on Mon-Fri 6:30AM to 4:00 PM, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Pat Ryan can be reached on (571)-272-1292. The fax phone number for the organization where this application or proceeding is assigned is (571)-273-8300.

GSE

  
Geoffrey S. Evans  
Primary Examiner  
Group 1700